

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION REPORT

I. HEADING

Date: May 15, 1998

From: Irmee Huhn, OSC, Region II
Removal Action Branch

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START

Subject: Pyridium Mercury Disposal Site No. 1 (Pyridium 1)
Village of Harriman, Orange County, New York

POLREP NO.: Five (5)

II. BACKGROUND

Site No.: EV
Response Authority: CERCLA
NPL Status: Non-NPL
State Notification: NYSDOH notified
Action Memo Status: Signed 09/29/95, 9/25/97 and 3/6/98
Start Date: 1/9/95, 9/30/97, and 3/18/98
Demobilization Date: 4/5/95, on-going
Completion Date: 4/7/95, on-going

III. SITE INFORMATION

A. Incident Category: Illegal dump

B. Site Description

1. Site location

The Pyridium Mercury Disposal Site No. 1 (Pyridium 1) was a trailer park located at the intersection of State Route 17M and Harriman Heights Road in the Village of Harriman, Orange County, New York. Five mobile home trailers were located at the trailer park. All the trailers were occupied as residential dwellings.

A white clay-like material discovered at the trailer park, was used to fill low-lying areas of a wetland. This material was reportedly a waste product from the production of niacinamide by the Pyridium Corporation during the 1940's and 1950's. Nepera Inc. of Harriman, New York, currently occupies and operates the facility previously operated by the Pyridium Corporation.

B. Preliminary Assessment/Site Inspection Results

On October 20, 1994, the United States Environmental Protection Agency (EPA) collected a composite waste sample for waste characterization and mercury speciation. The sample was analyzed for Target Compound List (TCL) parameters, Target Analyte List (TAL) parameters and toxicity by the Toxicity Characteristic Leachate Procedure (TCLP).

Although the TCLP results are below regulatory limits, the TAL analytical results indicate the presence of mercury at an estimated concentration of 130 milligrams per kilogram (mg/kg). All the other compounds detected were below the New York State Department of Environmental Conservation (NYSDEC) recommended soil cleanup objectives.

Mercury speciation analytical results indicated that the sample contained no significant quantities of elemental mercury, mono-methyl mercury, or dimethyl mercury. When the sample was dissolved in an acid leach test, the mercury +2 ion leachate concentration was essentially the same as the total mercury concentration. Based on these results, the laboratory concluded that the sample was a chemical substrate contaminated with a mercuric or mercurous salt.

On November 17, 1994, the EPA Environmental Response Team (ERT) and the Response Engineering and Analytical Contractor (REAC) collected dust samples in each of the mobile homes at the trailer park. The analytical results of the dust sampling

indicated mercury concentrations ranging from 0.84 mg/kg to 26.8 mg/kg.

On November 28, 1994, Nepera, Inc. of Harriman, New York signed an Administrative Order on Consent (AOC) with EPA agreeing to fund relocation of the residents of the trailer park. Nepera has distributed relocation settlements to eligible residents. The amount of the settlement was based on federal relocation guidelines.

On January 9, 1995, verbal authorization was given by the EPA Director of the Emergency and Remedial Response Division to decontaminate, remove and dispose of the mobile homes, storage sheds and decks from the trailer park; disconnect water, sewer and electric utilities; remove heating oil and propane storage tanks; and fence the property and post warning signs. An Action Memorandum confirming verbal authorization was approved on February 27, 1996. For specific details refer to Polreps 1-3.

IV. RESPONSE INFORMATION

A. Situation

1. Current situation

ERRS began excavating and stockpiling the contaminated material. The contaminated soil has been approved for disposal at GROWS and Tullytown landfills in Morrisville, PA.

2. Removal actions to date

On May 1, EPA contacted the PA Department of Environmental Protection to request an expedited review of the Form U for the waste materials acceptance into GROWS and Tullytown landfills. (The normal review period is 15 working days.) After numerous phone calls and letters both from EPA, the facility and contractors, the approval was given on May 15.

On Monday, May 4, eight test pits were excavated to determine the extent of water infiltrating into the excavation. Two test pits were dug to a depth of 6-7 feet. Water was entering both pits at a constant rate, which equalized after a couple hours. Dewatering and discharge to the local sewer treatment plant or discharge to surface water is being investigated.

On May 5, ERRS began excavating the northwest perimeter of the site where the contamination does not exceed a depth of 3'. Approximately 500 cubic yards of contaminated soil was stockpiled for transportation and disposal (T&D).

Due to water infiltration in excavations greater than 4 foot in depth, the material may have to be staged to drain excess water and then solidified. On May 6, a small scale test was conducted to determine the quantity of sawdust necessary to solidify the waste excavated from below the water level. Results of the test revealed that a 1:4 ratio of sawdust to waste will be necessary to solidify the material.

Silt fencing was installed around the culvert by the wetlands area to reduce the potential for soil to migrate from the site.

On Thursday, May 7, a 24" drainage pipe was damaged during excavation activities. The pipe repairs were completed on May 11.

On May 12-14, ERRS chipped the wood cut down during site preparation and sized larger stumps for future disposal. Large stones and boulders were also decontaminated and staged on site for future use in backfilling the excavation. Heavy rainfall the past 2 weeks created pools of water in the excavations and on the shoulder of the roadway. Water pooling in the roadway draining towards the stream was pumped back onto the site.

On Wednesday, May 13, START collected two water samples from the two deep test pits excavated on May 4. The analysis will be used to evaluate options for dealing with the water in the excavation.

Approximately 550 cubic yards of material have been excavated and stockpiled for T&D.

3. Enforcement

The Office of Regional Council is reviewing available site documentation to determine whether there are any potentially responsible parties (PRPs).

B. Next Steps

A. Continue excavation and begin T&D of contaminated soil.

- B. Investigate the availability of discharge permits to surface water and the sanitary sewer.
- C. Obtain permits from the Department of Transportation for excavation adjacent to the roadway.
- D. Dewater the excavation.
- E. Collect post excavation samples.
- F. Conduct a survey of the wetland to obtain contours for restoration.

C. Key Issues

Due to the heavy rains the past week and perched water infiltrating the excavations, water collection/treatment/disposal will be an issue. Options for dealing with the water will be added to the scope of work.

V. COST INFORMATION

The following are estimated costs for the removal action as of May 15, 1998:

	PROJECT CEILING	PREVIOUS COSTS	COSTS TO DATE	FUNDS REMAINING
ERCS/ERRS Costs	\$1,028,400	\$102,000	\$70,500	\$ 855,900
START (FAT) Costs	\$ 81,400	\$19,700	\$ 8,200	\$ 53,500
Contingency	\$ 209,500			\$209,500
EPA Cost	\$107,000	\$24,200	\$ 36,700	\$ 46,100
TOTAL PROJECT CEILING	\$1,426,300	\$145,900	\$115,400	\$1,165,000

The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The cost accounting provided in this report does not necessarily represent an exact monetary figure, which the EPA may include in any claims for cost recovery.

the 1990s, the number of people in the world who are under 15 years of age is expected to increase from 1.1 billion to 1.5 billion. The number of people aged 65 and over is expected to increase from 200 million to 400 million. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion. The number of people aged 15 and over is expected to increase from 3.5 billion to 4.5 billion.

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1. The first step is to identify the problem or question that needs to be answered. This involves understanding the context and the specific requirements of the task.

the 1990s, the number of people in the world who are undernourished has declined from 1.1 billion to 800 million. The number of people who are malnourished has declined from 1.5 billion to 1 billion. The number of people who are obese has increased from 100 million to 300 million. The number of people who are overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million. The number of people who are obese and overweight has increased from 100 million to 300 million.

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1. The first step in the process is to identify the problem. This involves gathering information about the situation and understanding the needs of the stakeholders involved.

2. Once the problem is identified, the next step is to develop a plan. This involves setting goals and determining the steps that need to be taken to achieve those goals.

3. The third step is to implement the plan. This involves putting the plan into action and monitoring progress.

4. The final step is to evaluate the results. This involves assessing the effectiveness of the plan and making adjustments as needed.

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The *Agrobacterium* strains were grown in the YEA medium for 24 h and then adjusted to the OD₆₀₀ of 0.1. The *Agrobacterium* strains were then grown in the YEA medium with the concentration of 0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1.0, 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.8, 2.9, 3.0, 3.1, 3.2, 3.3, 3.4, 3.5, 3.6, 3.7, 3.8, 3.9, 4.0, 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 4.9, 5.0, 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7, 5.8, 5.9, 6.0, 6.1, 6.2, 6.3, 6.4, 6.5, 6.6, 6.7, 6.8, 6.9, 7.0, 7.1, 7.2, 7.3, 7.4, 7.5, 7.6, 7.7, 7.8, 7.9, 8.0, 8.1, 8.2, 8.3, 8.4, 8.5, 8.6, 8.7, 8.8, 8.9, 9.0, 9.1, 9.2, 9.3, 9.4, 9.5, 9.6, 9.7, 9.8, 9.9, 10.0, 10.1, 10.2, 10.3, 10.4, 10.5, 10.6, 10.7, 10.8, 10.9, 11.0, 11.1, 11.2, 11.3, 11.4, 11.5, 11.6, 11.7, 11.8, 11.9, 12.0, 12.1, 12.2, 12.3, 12.4, 12.5, 12.6, 12.7, 12.8, 12.9, 13.0, 13.1, 13.2, 13.3, 13.4, 13.5, 13.6, 13.7, 13.8, 13.9, 14.0, 14.1, 14.2, 14.3, 14.4, 14.5, 14.6, 14.7, 14.8, 14.9, 15.0, 15.1, 15.2, 15.3, 15.4, 15.5, 15.6, 15.7, 15.8, 15.9, 16.0, 16.1, 16.2, 16.3, 16.4, 16.5, 16.6, 16.7, 16.8, 16.9, 17.0, 17.1, 17.2, 17.3, 17.4, 17.5, 17.6, 17.7, 17.8, 17.9, 18.0, 18.1, 18.2, 18.3, 18.4, 18.5, 18.6, 18.7, 18.8, 18.9, 19.0, 19.1, 19.2, 19.3, 19.4, 19.5, 19.6, 19.7, 19.8, 19.9, 20.0, 20.1, 20.2, 20.3, 20.4, 20.5, 20.6, 20.7, 20.8, 20.9, 21.0, 21.1, 21.2, 21.3, 21.4, 21.5, 21.6, 21.7, 21.8, 21.9, 22.0, 22.1, 22.2, 22.3, 22.4, 22.5, 22.6, 22.7, 22.8, 22.9, 23.0, 23.1, 23.2, 23.3, 23.4, 23.5, 23.6, 23.7, 23.8, 23.9, 24.0, 24.1, 24.2, 24.3, 24.4, 24.5, 24.6, 24.7, 24.8, 24.9, 25.0, 25.1, 25.2, 25.3, 25.4, 25.5, 25.6, 25.7, 25.8, 25.9, 26.0, 26.1, 26.2, 26.3, 26.4, 26.5, 26.6, 26.7, 26.8, 26.9, 27.0, 27.1, 27.2, 27.3, 27.4, 27.5, 27.6, 27.7, 27.8, 27.9, 28.0, 28.1, 28.2, 28.3, 28.4, 28.5, 28.6, 28.7, 28.8, 28.9, 29.0, 29.1, 29.2, 29.3, 29.4, 29.5, 29.6, 29.7, 29.8, 29.9, 30.0, 30.1, 30.2, 30.3, 30.4, 30.5, 30.6, 30.7, 30.8, 30.9, 31.0, 31.1, 31.2, 31.3, 31.4, 31.5, 31.6, 31.7, 31.8, 31.9, 32.0, 32.1, 32.2, 32.3, 32.4, 32.5, 32.6, 32.7, 32.8, 32.9, 33.0, 33.1, 33.2, 33.3, 33.4, 33.5, 33.6, 33.7, 33.8, 33.9, 34.0, 34.1, 34.2, 34.3, 34.4, 34.5, 34.6, 34.7, 34.8, 34.9, 35.0, 35.1, 35.2, 35.3, 35.4, 35.5, 35.6, 35.7, 35.8, 35.9, 36.0, 36.1, 36.2, 36.3, 36.4, 36.5, 36.6, 36.7, 36.8, 36.9, 37.0, 37.1, 37.2, 37.3, 37.4, 37.5, 37.6, 37.7, 37.8, 37.9, 38.0, 38.1, 38.2, 38.3, 38.4, 38.5, 38.6, 38.7, 38.8, 38.9, 39.0, 39.1, 39.2, 39.3, 39.4, 39.5, 39.6, 39.7, 39.8, 39.9, 40.0, 40.1, 40.2, 40.3, 40.4, 40.5, 40.6, 40.7, 40.8, 40.9, 41.0, 41.1, 41.2, 41.3, 41.4, 41.5, 41.6, 41.7, 41.8, 41.9, 42.0, 42.1, 42.2, 42.3, 42.4, 42.5, 42.6, 42.7, 42.8, 42.9, 43.0, 43.1, 43.2, 43.3, 43.4, 43.5, 43.6, 43.7, 43.8, 43.9, 44.0, 44.1, 44.2, 44.3, 44.4, 44.5, 44.6, 44.7, 44.8, 44.9, 45.0, 45.1, 45.2, 45.3, 45.4, 45.5, 45.6, 45.7, 45.8, 45.9, 46.0, 46.1, 46.2, 46.3, 46.4, 46.5, 46.6, 46.7, 46.8, 46.9, 47.0, 47.1, 47.2, 47.3, 47.4, 47.5, 47.6, 47.7, 47.8, 47.9, 48.0, 48.1, 48.2, 48.3, 48.4, 48.5, 48.6, 48.7, 48.8, 48.9, 49.0, 49.1, 49.2, 49.3, 49.4, 49.5, 49.6, 49.7, 49.8, 49.9, 50.0, 50.1, 50.2, 50.3, 50.4, 50.5, 50.6, 50.7, 50.8, 50.9, 51.0, 51.1, 51.2, 51.3, 51.4, 51.5, 51.6, 51.7, 51.8, 51.9, 52.0, 52.1, 52.2, 52.3, 52.4, 52.5, 52.6, 52.7, 52.8, 52.9, 53.0, 53.1, 53.2, 53.3, 53.4, 53.5, 53.6, 53.7, 53.8, 53.9, 54.0, 54.1, 54.2, 54.3, 54.4, 54.5, 54.6, 54.7, 54.8, 54.9, 55.0, 55.1, 55.2, 55.3, 55.4, 55.5, 55.6, 55.7, 55.8, 55.9, 56.0, 56.1, 56.2, 56.3, 56.4, 56.5, 56.6, 56.7, 56.8, 56.9, 57.0, 57.1, 57.2, 57.3, 57.4, 57.5, 57.6, 57.7, 57.8, 57.9, 58.0, 58.1, 58.2, 58.3, 58.4, 58.5, 58.6, 58.7, 58.8, 58.9, 59.0, 59.1, 59.2, 59.3, 59.4, 59.5, 59.6, 59.7, 59.8, 59.9, 60.0, 60.1, 60.2, 60.3, 60.4, 60.5, 60.6, 60.7, 60.8, 60.9, 61.0, 61.1, 61.2, 61.3, 61.4, 61.5, 61.6, 61.7, 61.8, 61.9, 62.0, 62.1, 62.2, 62.3, 62.4, 62.5, 62.6, 62.7, 62.8, 62.9, 63.0, 63.1, 63.2, 63.3, 63.4, 63.5, 63.6, 63.7, 63.8, 63.9, 64.0, 64.1, 64.2, 64.3, 64.4, 64.5, 64.6, 64.7, 64.8, 64.9, 65.0, 65.1, 65.2, 65.3, 65.4, 65.5, 65.6, 65.7, 65.8, 65.9, 66.0, 66.1, 66.2, 66.3, 66.4, 66.5, 66.6, 66.7, 66.8, 66.9, 67.0, 67.1, 67.2, 67.3, 67.4, 67.5, 67.6, 67.7, 67.8, 67.9, 68.0, 68.1

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